

AMENDMENTS TO THE CLAIMS

Please amend the claims of the present application as set forth below.

In accordance with the PTO's revised amendment format, a detailed listing of all claims has been provided. A status identifier is provided for each claim in a
5 parenthetical expression following each claim number. Changes to the claims are shown by strikethrough (for deleted matter) or underlining (for added matter).

Claim History Summary:

Claims 1-26 were originally filed.

10 In a Preliminary Amendment dated May 21, 2002, claims 1-26 were cancelled and new claims 27-52 were added.

In the Preliminary Amendment, a Provisional Election of Species elected new claims 27-28, 30-32, 34-37, 41-46, 47-48 and 50-52.

Claims 29, 33, 38-40 and 49 were withdrawn from consideration.

15 Claim Summary of Present Office Action

Claim 52 is allowed; claims 35-37, 41-44 and 51 are objected to; and claims 27, 28, 30-32, 34, 45-48 and 50 are rejected.

Claims 27-28, 30-32, 34-37, 41-46, 47-48 and 50-52 are pending.

Claim Summary of Present Response:

20 Claims 27 and 47 are currently amended.

Claims 27-28, 30-32, 34-37, 41-46, 47-48 and 50-52 are pending.

Detailed Listing of All Claims 1-52:

Claims 1-26 (Cancelled)

Claim 27 (Currently amended): A heat exchanger comprising:

- 5 a. a core having a heat exchange portion;
- b. a tube including a motion limiter attached thereto and extending
radially therefrom to limit upward or downward axial motion of the tube, wherein
at least a portion of the tube extends into the core and is capable of being in
contact with the core to transfer loads between the tube and the core, to provide
10 support to the core and to increase the stiffness of the core, and wherein the
tube is positioned at least adjacent to the heat exchange portion of the core;
- c. a load bearing member positioned adjacent the core; and
- d. a first mount positioned between the tube and the load bearing
member, so that the load bearing member can receive loads from the tube via
15 the motion limiter.

Claim 28 (Previously added): The heat exchanger of Claim 27, wherein the first
mount is adjustable to allow the tube to expand separately from the load
bearing member.

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Claim 29 (Withdrawn)

Claim 30 (Previously added): The heat exchanger of Claim 27, further comprising a manifold for passing a fluid from and to the core.

Claim 31 (Previously added): The heat exchanger of Claim 27, wherein the
5 heat exchanger further comprises a second mount positioned between the tube and the core, wherein the second mount is capable of transferring loads between the tube and the core.

Claim 32 (Previously amended): The heat exchanger of Claim 28, wherein the
10 first mount comprises:

a channel defined by the load bearing member, wherein the motion limiter is received by the channel such that the movement of the motion limiter is restrained by the channel.

15 Claim 33 (Withdrawn)

Claim 34 (Previously added): The heat exchanger of Claim 31, wherein the first mount is capable of substantially restraining axial movement of the tube and wherein the second mount is capable of substantially restraining lateral
20 movement of the tube.

Claim 35 (Previously added): The heat exchanger of Claim 34, wherein the tube further comprises a length and a core end, wherein the core end is positioned within the core and wherein the first mount is positioned along the length of the tube and the second mount is positioned near the core end of the
5 tube.

Claim 36 (Previously added): The heat exchanger of Claim 35, wherein the second mount is a sliding mount capable of receiving substantially lateral loads from the tube while allowing the tube to expand along its length.

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Claim 37 (Previously added): The heat exchanger of Claim 36, wherein the second mount comprises a cavity defined within the core, wherein the cavity is positioned about the core end of the tube.

15 Claims 38-40 (Withdrawn)

Claim 41 (Previously added): The heat exchanger of Claim 27, wherein the heat exchange portion comprises a layering of heat exchange members.

20 Claim 42 (Previously added): The heat exchanger of Claim 41, wherein the tube is positioned at least adjacent the heat exchange members, so to limit

movement of the heat exchange members and to receive loads from the heat exchange members, so to increase the stiffness of the core.

Claim 43 (Previously added): The heat exchanger of Claim 42, wherein the
5 tube is positioned through at least one of the heat exchange members.

Claim 44 (Previously added): The heat exchanger of Claim 43, wherein the
tube defines a passage therewithin, and wherein the tube is permeable so that
the passage is in communication with the heat exchange portion of the core.

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Claim 45 (Previously amended): The heat exchanger of Claim 27, wherein the
tube has a longitudinal axis and wherein the first mount restrains the tube so to
allow the transfer of loads aligned substantially with the longitudinal axis of the
tube, from the tube via the motion limiter to the load bearing member.

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Claim 46 (Previously amended): The heat exchanger of Claim 45, wherein the
first mount restrains the tube so to allow the transfer of torsional loads from the
tube via the motion limiter to the load bearing member.

20 Claim 47 (Currently amended): A heat exchanger comprising:

a. a core having a heat exchange portion, wherein the heat
exchange portion comprises a layering of heat exchange members, and

wherein the heat exchange members are capable of being displaced substantially laterally;

- b. a tube having a length and including a motion limiter extending radially therefrom to limit upward or downward axial motion of the tube, wherein
5 at least a portion of the tube extends adjacent to more than one of the heat exchange members and is capable of being in contact with the heat exchange members to transfer loads between the tube and the heat exchange members, to provide support to the core and to increase the stiffness of the core;
- c. a load bearing member positioned adjacent the core; and
- 10 d. a first mount positioned between the tube and the load bearing member, so that the load bearing member can receive loads from the tube via the motion limiter.

Claim 48 (Previously amended): The heat exchanger of Claim 47, wherein the
15 first mount comprises:

a channel defined by the load bearing member, wherein the motion limiter is received by the channel such that the movement of the motion limiter is restrained by the channel.

20 Claim 49 (Withdrawn)

Claim 50 (Previously added): The heat exchanger of Claim 47, wherein the heat exchanger further comprises a second mount positioned between the tube and the core, wherein the second mount is capable of transferring loads between the tube and the core.

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Claim 51 (Previously added): The heat exchanger of Claim 50, wherein the second mount is a sliding mount capable of receiving substantially lateral loads from the tube while allowing the tube to expand along its length.

10 Claim 52 (Previously amended): A heat exchanger comprising:

- a. a core having a heat exchange portion;
- b. a tube having a length and an end and including a motion limiter extending radially therefrom to limit upward or downward axial motion of the tube, wherein at least a portion of the tube extends into the core so that the end
15 of the tube is positioned within the core, wherein the tube is capable of being in contact with the core to transfer loads between the tube and the core, to provide support to the core and to increase the stiffness of the core, and wherein the tube is positioned at least adjacent to the heat exchange portion of the core;
- c. a load bearing member positioned adjacent the core; and
- 20 d. a mount positioned between the end of the tube and the core, wherein the mount is capable of transferring loads between the tube and the core.